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Developing reading skills in English for agricultural purposes

A GUIDE FOR READING AND USING ONLINE RESOURCES

Co-funded by the
Tempus Programme
of the European Union

This material is created within Tempus project "CaSA "Building Capacity of Serbian Agricultural Education to Link with Society" 544072-TEMPUS-1-2013-1-RS-TEMPUS-SMHES (2013 - 4604 / 001 – 001) which has been funded with the support of the European Commission. This material reflects the view of the author only and the Commission can not be held responsible for any use which may be made of the information contained therein.

With the support of the Tempus programme of the European Union.

Foreword

The development of the information society and information technology gave rise to new opportunities for learning and challenged established practices considering how teaching and learning should be organized. Yet, until recently, much of the learning materials were protected by propriety rights and not reachable without passwords. The open educational resource (OER) movement aims to encourage and enable freely sharing content. Open educational resources (OER) are digitalized materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research (Center for Educational Research and Innovation, OECD, 2007) including learning content, software tools, and implementation resources such as open licenses.

With the development of the World Wide Web and open educational resources, more texts are now processed on screen. Reading in online environment is often considered as reading practice that is different to that of reading in print. A key difference between the two kinds of reading is considered to be rooted in the nature of hypertext where presentation of information is not linear but multi-linear affording different access routes and different reading options.

In order to put the reading into specific context, this material has been prepared as a short guide for reading and using online resources in the field of agriculture. Various online resources are presented, both generally and specifically for the agriculture and related disciplines. *A guide for reading and using online resources* is designed to be used by high school teachers in the field of agriculture and related fields, and agricultural advisors in Serbia. It can be useful for the current and future students of both agriculture and other fields of science, and for professionals in other domains.

Printing of the guide is funded by TEMPUS project CaSA Building Capacity of Serbian Agricultural Education to Link with Society, coordinated by University of Belgrade, Faculty of Agriculture.

Čačak, 12 February 2016
The author

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1. Reading and using online resources

The development of the information technology led to new opportunities for learning; at the same time it challenged established views and practices considering how teaching/learning should be organized. Since the beginning of the 21st century, higher education sector has been using the Internet and other digital technologies to develop and distribute education. Learning resources developed in such a new learning and teaching environment is often considered a key intellectual property. However, more and more institutions and individuals are sharing digital learning resources over the Internet openly and without cost, as open educational resources (OER).

Open educational resources (OER) are digitalized materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research including learning content including full courses, courseware, content modules, learning objects, collections and journals, tools referring to software which includes searching and organization of content, content and learning management systems, content development tools, and online learning communities, and implementation resources including intellectual property licenses to promote open publishing of materials, design principles of best practice and localize content (OECD, 2007, pp. 30-31, Center for Educational Research and Innovation).

With the development of the Internet more and more texts are processed on screen, e.g. journals, magazines, articles or web pages in general. Thus, there has been an interest in researching whether reading web documents should be considered a new mode of reading. Reading in online environment is often considered as reading practice that is different to that of reading in print (Hanson-Smith, 2003; Kasper, 2003). A key difference between the two kinds of reading is considered to be rooted in the nature of hypertext where presentation of information is multi-linear since it is organized in a semantic network in which different related passages are connected to each other by means of keyword links. This hypertextual nature fosters a flexible pattern of discovery which promotes greater cognitive effort on the part of readers; thus, online resources and hypertext have many advantages as a valuable instructional tool to develop learners' reading skills (Uso-Juan & Ruiz-Madrid, 2009, p. 62). However, the nature of hypertext also has many disadvantages for readers deriving from the medium itself, and including disorientation in poorly designed systems that lack context

clues, information overload and confusion, and problems associated with reading from the screen.

2. How is traditional, in-class reading different from online reading?

Traditional reading (in school)	Online reading
Texts are mostly narrative (e.g. novels, short stories, plays, poems).	Texts are mostly informational.
Reading takes place mostly in whole-class or small group reading activities; readers can be grouped together by level.	Reading is more individualized, often with one student at one computer.
Writers/sources are typically deemed authoritative by virtue of being published.	Because it's easy for anyone to publish online, authority of information typically merits more evaluation.
Information typically consists only of text, sometimes with images.	Hyperlinks, images, audio, and video are usually part of the reading experience.
Information typically flows sequentially (from the first word of the book to the last).	Information can flow non-sequentially (one word might lead via hyperlink to an entire new piece of reading).
Reading is focused on one page at a time — choice of the reader is limited.	Reading can be interactive (reader response possibilities, potentially limitless decisions about where to go with the text, etc.).

What do we do when we search for the texts on the internet?

We usually use some of the search engines (Google, Bing, etc.)

Some strategies for strengthening reading comprehension:

- synthesize online reading into meaningful chunks of information (finding important points and explain them in your own words);
- use an ability to scan a page instead of reading every word (use key words, headings to focus on what is important);
- avoid distractions as much as necessary - advertising-blocking tools such as Ad-Block Plus (as a Firefox add-on to block ads) to reduce unnecessary, and unwanted, content from a web page;
- understand the value of a hyperlink before you click the link. It is easier if the creator of the page puts the hyperlink into context, but if that is not the case, then the reader has to make a judgment about the value, safety, and validity of the link;

- navigate a path from one page in a way that is clear and logical. Draw a map of the path a reader goes on an assignment that uses the web. That visualization of the tangled path might be a valuable insight for young readers.

It is important to use relevant internet sources.

Different extensions:

.com - presents the word "commercial," most businesses prefer a .com domain name since it is highly recognizable

.**co.uk** - is the country code for United Kingdom. The .org portion of the extension indicates the domain name is for an organization

.org - presents the word "organization," and is primarily used by non-profits groups or trade associations

.info is for credible resource Web sites and signifies a "resource" web site. It's the most popular extension beyond .com, .net and .org.

.edu - is limited to fully accredited postsecondary institutions of higher learning, such as four-year colleges.

3. Open Access Resources

Open Access is the immediate, online, free availability of research outputs without the severe restrictions on use commonly imposed by publisher copyright agreements.

Some benefits of open access: with Open Access, researchers can read and build on the findings of others without restriction; Open Access means that teachers and their students at all levels of education have access to the latest research findings throughout the world.

3.1. Some relevant Open Access services

DOAJ (Directory of Open Access Journals) is a service that indexes high quality, peer reviewed Open Access research journals, periodicals and their articles' metadata. It is available at http://www.doaj.org.

Some of the journals available in DOAJ in the field of agriculture/biotechnology:

Agriculture & Food Security, available at http://www.agricultureandfoodsecurity.com/

International Food and Agribusiness Management Review, available at http://www.ifama.org/i4a/pages/index.cfm?pageid=3316

Studies in Agricultural Economics, available at https://www.aki.gov.hu/studies

International Journal of Agronomy, available at http://www.hindawi.com/journals/ija/

Figure 1. Home page of DOAJ on the World Wide Web

Elsevier Open Access Journals, available at http://www.elsevier.com/about/open-science.

Some of the journals available among Elsevier Open Access Journals in the field of agriculture/biotechnology:

Agriculture and Agricultural Science Procedia, available at http://www.journals.elsevier.com/agriculture-and-agricultural-science-procedia/

Biotechnology Reports, available at http://www.journals.elsevier.com/biotechnology-reports/

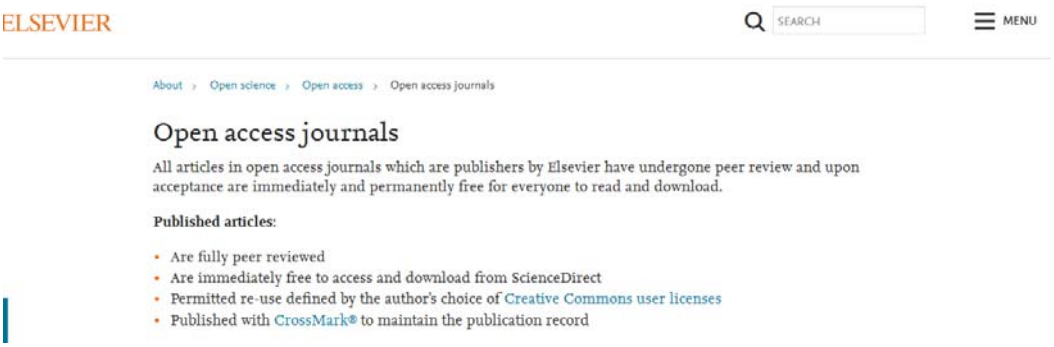

Figure 2. Home page of Elsevier Open Access Journals on the World Wide Web

Google Scholar provides a simple way to broadly search for scholarly literature. From one place, you can search across many disciplines and sources: articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites. It is available at https://scholar.google.com/ or https://scholar.google.com/intl/en/scholar/about.html.

Some of the published material available in Google Scholar in the field of agriculture/biotechnology:

Ayers, R. S., & Westcot, D. W. (1976). Water Quality for Agriculture. Rome: Food and Agriculture Organization of United Nations. Available at http://www.calwater.ca.gov/Admin_Record/C-110101.pdf

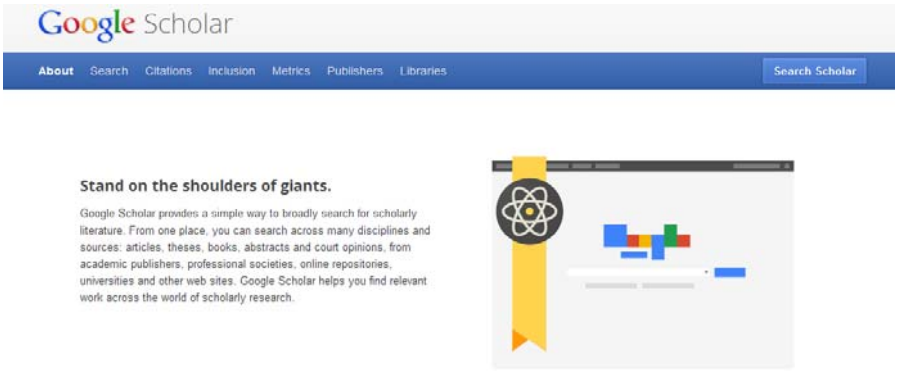

Figure 3. Home page of Google Scholar on the World Wide Web

ScienceDirect Open Access - open access base containing journals in various fields of science. It is available at http://www.sciencedirect.com/science/jrnlallbooks/all/open-access.

Some of the journals available among ScienceDirect Open Access Journals in the field of agriculture/biotechnology:

Agriculture and Agricultural Science Procedia, available at http://www.sciencedirect.com/science/journal/22107843

Biotechnology Reports, http://www.sciencedirect.com/science/journal/2215017X

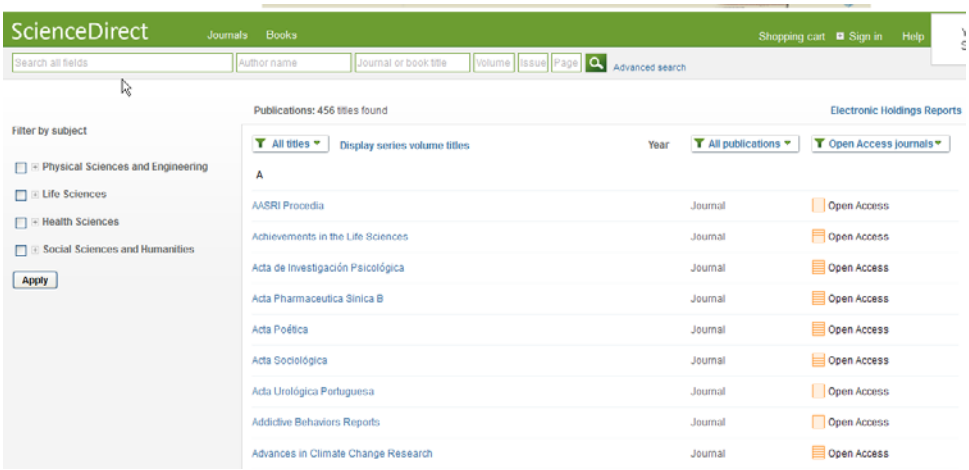

Figure 4. Home page of ScienceDirect Open Access Journals on the World Wide Web

Springer Open is another open access base containing open access journals in all areas of science. It is available at http://www.springeropen.com/.

Some of the journals available in Springer Open in the field of agriculture/biotechnology: *Agricultural and Food Economics*, http://www.springer.com/economics/agricultural+economics/journal/40100 or http://www.agrifoodecon.com/

Botanical Studies, http://www.springer.com/life+sciences/plant+sciences/journal/40529 or http://www.as-botanicalstudies.com/

Figure 5. Home page of Springer Open on the World Wide Web

Wiley Open Access is a program of fully open access journals. All research articles published in Wiley Open Access journals are immediately freely available to read, download and share. The fully open access journals are published in collaboration with authoritative journals and societies as well as supported by internationally renowned editorial board members. It is available at http://www.wileyopenaccess.com/.

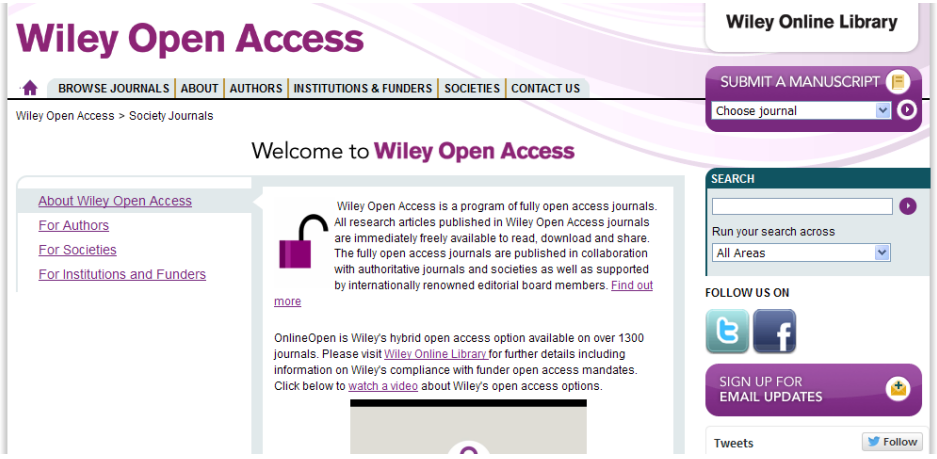

Figure 6. Home page of Wiley Open Access on the World Wide Web

Some of the journals available in Wiley Open Access in the field of agriculture/biotechnology:

Food and Energy Security, http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%292048-3694

3.2. Open Access resources and repositories in Serbia

- **KoBSON** (http://www.kobson.nb.rs) is a new form of organizing libraries in Serbia where National Library of Serbia (http://www.nb.rs/) is a leading institution in the Consortium (other members are Matica Srpska Library, University of Belgrade library "Svetozar Markovic", Nis University Library "Nikola Tesla", The University Library in Kragujevac, Serbian Academy of Science and Arts Library).

The Consortium's main goals include the improvement of access to electronic information, promotion of Serbian science publishing, optimized purchase of science information from abroad, and digital publication of previously printed ones. It is funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia. There are three repositories available through KoBSON:

1) **Digital Object Identifier (doiSerbia) Repository** – contains the articles from the leading Serbian scientific journals; all articles are published under Open Access; it is available at http://www.doiserbia.nb.rs/;

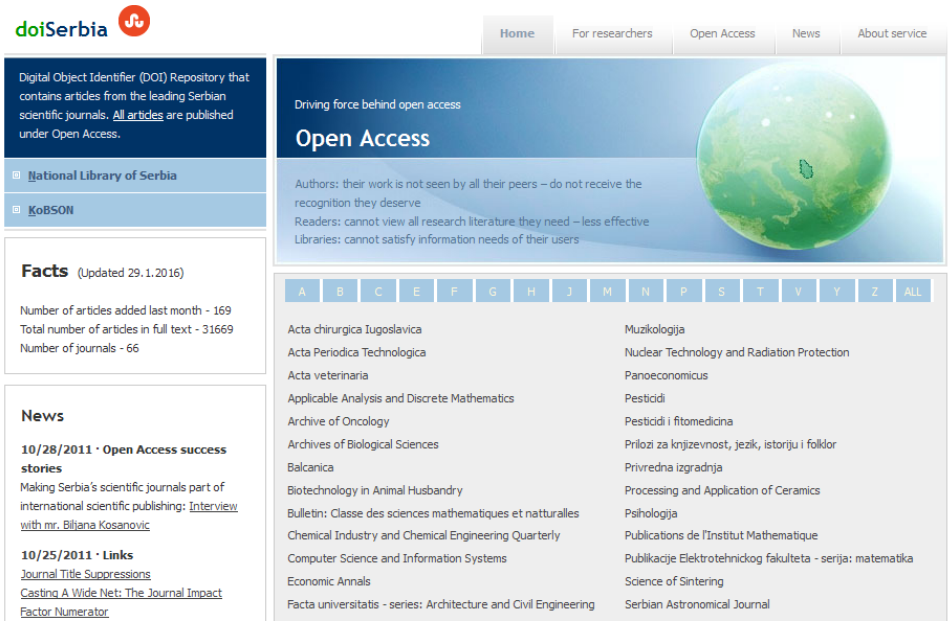

Figure 7. Home page of doiSerbia Repository on the World Wide Web

2) **doiSerbiaPhD** is national register of e-thesis deposited in the University Repositories across the Serbia. Every thesis has a DOI in order to expand its

visibility. This register contains links to full texts of every single e-thesis deposited in University repositories. Available at http://www.doiserbia.nb.rs/phd/;

3) **Nasi u FP** – a digital library of articles (peer-reviewed and other important forms of publications (pre-prints or conference publications)) published by Serbian researchers within Seventh Research Framework Programme (FP7) – Open Access pilot project launched by the European Commission. Available at http://eprints.kobson.nb.rs/

- University of Belgrade, University library "Svetozar Markovic" (http://www.unilib.bg.ac.rs/) has its own **Digital repository PHAIDRA** (Permanent Hosting, Archiving and Indexing of Digital Resources and Assets). It is a system for permanent archiving, indexing and use of digital objects of the University of Belgrade and is available at https://phaidrabg.bg.ac.rs/;
- University of Novi Sad (http://www.uns.ac.rs/en/) has its own **CRIS UNS** digital repository of the dissertations; it is available at http://cris.uns.ac.rs/searchDissertations.jsf.

3.3. Some Open Access resources in the field of agriculture

NaRA is a digital repository that collects, preserves, and distributes digital material in the field of agriculture and presents national repository for agricultural education in Serbia; it contains national scientific journals, proceedings, e-learning materials, national projects, and all materials created within the CaSA project as well as the university teacher courses for in-service education of secondary school teacher and agricultural advisors. It is created within CaSA project (Building Capacity of Serbian Agricultural Education to Link with the Society) and is available at http://arhiva.nara.ac.rs/.

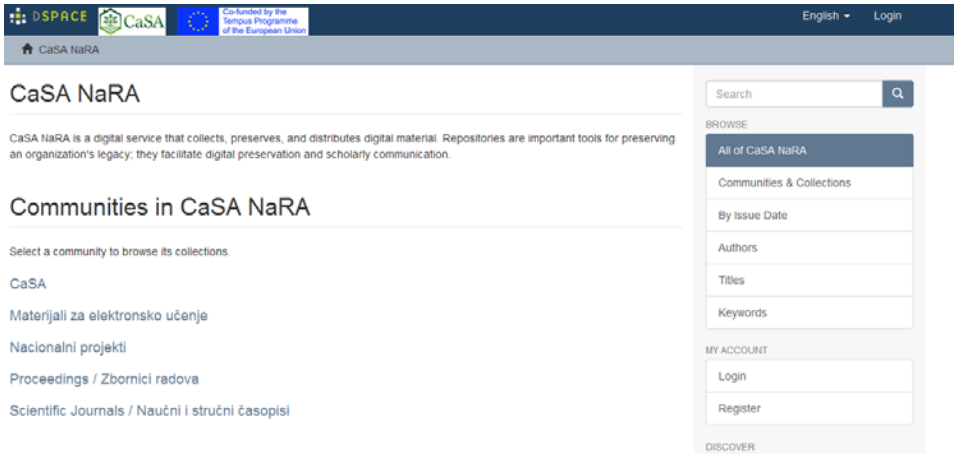

Figure 8. Home page of NaRA on the World Wide Web

The example of good practice from European Union is **INRA** portal (abbreviation of L'Institut national de la recherche agronomique). INRA is **French National Institute for Agricultural Research,** Europe's top agricultural research institute and the world's number two centre for the agricultural sciences. The portal is available in French and English at http://institut.inra.fr/ (Home page shown in Figure 9).

Figure 9. Home page of INRA portal on the World Wide Web

It is important that INRA portal links to **Prodinra – the INRA Open Archive** available in three languages, French, English and Spanish at http://prodinra.inra.fr/?locale=fr, http://prodinra.inra.fr/?locale=en, and http://prodinra.inra.fr/?locale=es, respectively. This archive presents relevant research results in the field of agriculture across various topics, departments and products – journal articles, acts, reports, theses, audiovisual materials, education materials and courses, etc., making them available online to the researchers, students, academic and expert community, farmers, producers, and all stakeholders in agriculture not only in France, but also in Europe and the world.

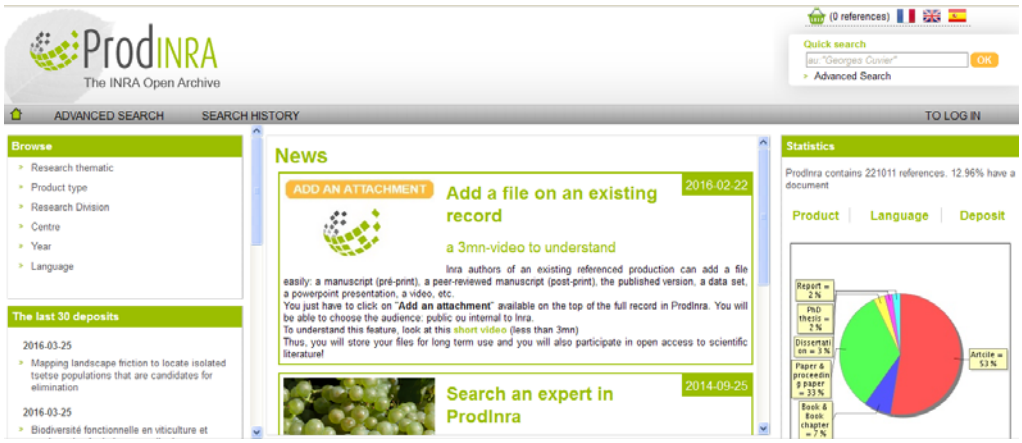

Figure 10. Home page of Prodinra – the INRA Open Archive on the World Wide Web

FAO, abbreviation of Food and Agriculture Organization of the United Nations, is an intergovernmental organization having 194 Member Nations, two associate members and one member organization, the European Union. It is available in six languages – Arabic, Chinese, English, French, Russian, and Spanish at http://www.fao.org/about/en/.

Figure 11. Home page of FAO on the World Wide Web

An interesting online resource in the filed of agriculture is **CeRA** – Consortium for e-resources in agriculture established in India in 2007 for facilitating accessibility of scientific journals to all researchers / teachers in the National Agricultural Research System by providing access to information specially access to journals online which is crucial for having excellence in research and teaching. It is available at http://cera.iari.res.in/index.php/en/.

Figure 12. Home page of CeRA on the World Wide Web

4. GLOSSARY

CeRA - abbreviation of Consortium for e-resources in agriculture;

CRIS UNS – *abbrev.* Current Research Information System University of Novi Sad; it is a digital repository of dissertations at the University of Novi Sad;

DOAJ – *abbrev.* Directory of Open Access Journals;

doiSerbia – *abbrev.* Digital Object Identifier and represents the repository of the articles from the leading Serbian scientific journals;

e-learning - is interactive learning in which the learning content is available online and provides automatic feedback to the student's learning activities (Paulsen, 2003, cited in Devdžić, 2006, p. 2);

FAO – *abbrev.* Food and Agriculture Organization of the United Nations;

Hyperlink *n*. **-** a connection that allows you to move easily between two computer documents or two pages on the internet;

Hypertext *n*. **-** a database format in which information related to that on a display can be accessed directly from the display; *also*: material (as text) in this format; *adj*. **hypertextual**

INRA – *abbrev.* L'Institut national de la recherche agronomique, or French National Institute for Agricultural Research;

Interactive *adj*. **-** an interactive system or computer program is designed to involve the user in the exchange of information; involving communication between people;

Keyword *n*. **-** any significant word or phrase, especially a word used to describe the contents of a document;

Learning Management System – abbreviated LMS, is a software application for the administration, documentation, tracking, reporting and delivery of electronic educational technology (also called e-learning) courses or training programs;

Multi-linear – *adj*. having, consisting of, or involving many lines; linear in several respects;

NaRA – *abbrev.* National Repository in Agriculture;

Narrative *adj*. – telling a story;

OER - *abbrev.* Open Education Resource, are freely accessible, openly licensed documents and media that are useful for teaching, learning, and assessing as well as for research purposes;

OECD - *abbrev.* Organization for Economic Co-operation and Development is an international economic organization of 34 countries, founded in 1961 to stimulate economic progress and world trade;

Online - done over the Internet;

Open Access – abbreviated OA, stands for unrestricted access and unrestricted reuse;

PHAIDRA - *abbrev.* Permanent Hosting, Archiving and Indexing of Digital Resources and Assets; it represents digital repository of the University of Belgrade;

Repository *n.* **–** in information technology it is a central place in which an aggregation of data is kept and maintained in an organized way, usually in computer storage; the term is from the Latin *repositorium*, a vessel or chamber in which things can be placed, and it can mean a place where things are collected;

Resource *n.* **-** something that you can use to help you to achieve something, especially in your work or study; a source of information or expertise;

References

Cambridge dictionaries online, Available at http://dictionary.cambridge.org/dictionary/english/

CeRA, Available at http://cera.iari.res.in/index.php/en/

Collins English Dictionary Online, Available at http://www.collinsdictionary.com/dictionary/english

CRIS UNS, Available at http://cris.uns.ac.rs/searchDissertations.jsf

Devedžić, V. (2006). *Semantic Web and Education.* Springer.

DOAJ, Available at http://www.doaj.org

doiSerbiaPhD, Available at http://www.doiserbia.nb.rs/phd/

doiSerbia Repository, Available at http://www.doiserbia.nb.rs/

Elsevier Open Accesss Journals, Available at http://www.elsevier.com/about/open-science

FAO, Available at http://www.fao.org/about/en/

Google Scholar, Available at https://scholar.google.com/ or https://scholar.google.com/intl/en/scholar/about.html

Hanson-Smith, E. (2003). Reading electronically: challenges and responses to the reading puzzle in technologically-enhanced environments. *The Reading Matrix: An International Online Journal*, *3*(3). Retrieved February 1, 2016 from http://www.readingmatrix.com/articles/hanson-smith/

INRA, Available at http://institut.inra.fr/

Kasper, L. (2003). Interactive hypertext and the development of ESL students' reading skills. *Reading Matrix,* *3*(3). Retrieved February 1, 2016 from http://www.readingmatrix.com/archives/archives_vol3_no3.html

KoBSON, Available at http://www.kobson.nb.rs

Macmillan Dictionary Online, Available http://www.macmillandictionaries.com/dictionary-online/

Merriam-Webster Online Dictionary, Available at http://www.merriam-webster.com/

NaRA, Available at http://arhiva.nara.ac.rs/

Naši u FP, Available at http://eprints.kobson.nb.rs/

OECD (2007). Giving Knowledge for Free: the emergence of open educational resources (PDF). Center for Educational Research and Innovation. Retrieved 30 January 2016 from http://www.oecd.org/edu/ceri/38654317.pdf

Open Access, Available at https://www.plos.org/open-access/

Oxford Dictionaries Online, Available at http://www.oxforddictionaries.com/

PHAIDRA, Available at https://phaidrabg.bg.ac.rs/

Prodinra, the INRA Open Archive, Available at http://prodinra.inra.fr/?locale=fr, http://prodinra.inra.fr/?locale=en, and http://prodinra.inra.fr/?locale=es

ScienceDirect Open Access, Available at http://www.sciencedirect.com/science/jrnlallbooks/all/open-access

SpringerOpen, Available at http://www.springeropen.com/

Uso-Juan, E., & Ruiz-Madrid, M. N. (2009). Reading printed vs online texts: A study of EFL learners' strategic reading behavior. *International Journal of English Studies, 9*(2), 59-79. ISSN 1989-6131. Available at http://revistas.um.es/ijes/article/view/90751/87551. Retrieved 31 January 2016.

What is repository?, Retrieved 30 January 2016 from http://searchoracle.techtarget.com/definition/repository

Wiley Open Access, Available at http://www.wileyopenaccess.com/

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Milevica Bojović, PhD in Philology and English linguistics (born on 27 February 1970) is a foreign language lecturer for English as a foreign language and English for specific purposes at the Faculty of Agronomy in Čačak, University of Kragujevac.

She completed all levels of education at the Faculty of Philology, University of Belgrade, Serbia, becoming a Bachelor of English language and literature in 1993 and Magister of Philology in Methodology of foreign language teaching/learning in 1998. In 2013 she became a Doctor of Philology (PhD) – Profile: Applied linguistics-English linguistics.

Her research interests include applied linguistics, psycholinguistics, methodology of foreign language learning/teaching, second language acquisition, particularly development of communicative language ability in a foreign language as well as teacher education/training and adult education.